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ABSTRACT

Limited ability students, reluctant to revise and edit written compositions, frequently produce final drafts that are below the minimum standards set by high school English departments. The use of the microcomputer and word processing may provide a means by which students can revise and improve their finished products. Programs are continuously being developed to add to the traditional word processing format in an attempt to help writers improve the readability of their texts. Additional benefits to using the computer include (1) multiple copies of a draft can easily be printed for use in peer editing groups, (2) final drafts can be displayed without the stigma of poor handwriting, (3) the absence of handwriting encourages large revisions, and (4) revisions can be more easily done in stages, leaving writers free to concentrate on different aspects of revising at different times. Although a number of arguments can be made against computer usage with reluctant writers, the fact remains that teachers in remedial writing courses have been unable to help their students through the use of traditional textbooks. Perhaps through the study of the effects of computers and text writers, the revising strategies of reluctant writers can be improved, even though the level of revision may only include mechanical skills, lexical and structural aspects of a text. (HOD)

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Problems with Current Research in Writing Using the Microcomputer

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I. Identification of Problem

Writing, a recursive process, produces a product composed of sentences which relates a pattern of thought from writer to audience. Within the writing process are distinct stages: the prewriting stage, during which a writer plans, invents, brainstorms, researches, discovers; the composing stage, during which a writer actually arranges the words, sentences, and paragraphs that illustrate the thought of the prewriting stage; the revising stage, during which the writer, either concurrent with the composing stage or after the composing stage, reviews, evaluates, and rewrites in order to improve the original product; the publishing stage, during which the writer produces his final draft that is ready to be read by the intended audience.

The focus of this study is the revision stage, which has been divided into two categories: (1) revision for quality, which involves flow of sentences, patterns of expression of thought, logical arrangement of ideas, elaboration and/or substantiation of ideas; (2) editing of mechanics, which includes spelling, punctuation, grammatical usage.

Because low-achieving, limited ability students usually have great difficulty producing clearly written communication, there has been much research and experimentation in an attempt to understand and alleviate their difficulties. Mina Shaughnessy, in Errors and Expectations (Oxford U. Press, 1977, p. 226), explains that an inexperienced writer's "thought often seems to halt at the boundary of each sentence rather than move on, by

gradations of subsequent comment, to an elaboration of the sentence." In addition, the basic writer frequently becomes bogged down in the mire of editing errors that muddy final drafts.

The computer revolution may be providing educators with a means for overcoming many of the obstacles that plague a basic writer. The possibility exists that the use of the microcomputer and its companion word processing software could be the tool that help a reluctant or performance-limited basic writer to revise and edit his work in order to develop a computer printed final draft that will surpass the quality of his pen and paper final draft.

II. Problem Statement

Limited ability students, reluctant to revise and edit written compositions, frequently produce final drafts that are below the minimum standards set by public high school English departments. The use of the microcomputer and wordprocessing may provide a means by which students will revise and, therefore, improve their finished products.

III. Rationale through Literature

The use of microcomputers as a teaching devise is in its infancy. Although word processing has been used in business courses and as a device for producing relatively error free final, professional drafts, there has been little or no research done to explore its use to improve the writing of low ability, low achieving public high school students.

Low achievers, sometimes identified as disadvantaged learners, reluctant writers, or basic writers, have problems that are particular to their performance level. These students (referred to as RW) are described by Joseph Mersand as those who lack desire to excel scholastically or intellectually, are slow in grasping abstractions, are incoherent in thinking, lack self reliance and initiative, are highly imitative, lack desirable work and study habits, and are usually anti-school and anti-teacher.[1] Therefore, finding writing difficult and frequently meaningless, the RW is often discouraged with his own meager attempts and results. These feelings of lowered self-esteem are reinforced by his receiving low grades, negative responses, and corrections he doesn't understand.[2]

The late Mina Shaughnessy, who had been Director of Instructional Resource Center of City University Of New York, has attempted to analyze the problems of RWs that undermine written fluency and success. Aside from their lack of awareness of their own editing errors such as run-on sentences, fragments, agreement problems, and parallel construction imbalances, they lack the necessary vocabulary and the ability to generalize. They are often devoid of the capacity for movement between abstract and concrete thoughts. Their papers frequently do not

contain both specifics and generalizations that are so necessary to clearly written communication.[3]

An additional barrier to communication is the physical act of handwriting. The sheer drudgery of copying and recopying messy pages in order to achieve a somewhat error free final draft is a significant impediment to the revising process of the RW, especially one whose handwriting is labored and childlike.[4] Often, "the content that is carried in such writing is 'slow' or intellectually immature."[5]

The writing of the RW is also hindered because he has become dependent upon external sources for the success of the final written draft. Since his locus of control is external, when he leaves the structure of the classroom and the guidance of the teacher, he frequently does not write unless he is absolutely required to, and he is completely incapable of evaluating and revising his own work. His need to transfer the locus of control internally has not been accomplished. Berkenkorter, in "Understanding a Writer's Awareness of Audiences," (CCC, Dec., 1981) explains that experienced writers use internal locus of control to ask themselves questions as if they were the audience; therefore, they are constantly revising in order to clarify.[6] In most cases the RW, unable to accomplish this, produces at minimum competency which has become his maximum.[7]

The RW composes differently, revises differently, and makes different assumptions than does the experienced writer.[8] Witte and Faigley, in "Analyzing Revision," (CCC, Dec., 1981) focus on the conclusion that revision cannot be separated from other aspects of composing, since expert writers "move back and forth among the various activities of composing and...frequently review

what they have written and make changes while in the midst of generating a text."[9] RWs, in contrast, consider the revision process as a recopying activity and are reluctant to accept that revision is not just an activity that eliminates surface errors.[10]

In an attempt to encourage competent writing, educators on the college level are turning to computers and word processing to teach students to write, rewrite, add, delete, rearrange, and edit on a screen and then produce the finished draft on a printer.[11] This technique can now enable students to behave like a professional writer by sitting at a keyboard and working with the screen message. For years, students have studied grammar, punctuation, usage, organization that in many cases have not transferred to their writing. Now, through the computer, the student can become an interactive participant in his own writing. "What the textbook, handbook, or teacher says is less important than what the student does."[12]

Educators are looking at the possibility that revision on the word processor can solve many of the RW's problems. "It could...suplement rather than strain writer's conceptualizing powers" since it creates an ease of revising. All drafts are stored in the computer's memory and recalled when needed, making recopying effortless. Word processing might encourage the RW to experiment with language and even enjoy the novelty of revising with the computer. Perhaps surprise, innovative, or serendipitous learning will occur.[13]

Richard M. Collier, a doctoral candidate in linguistics, in Canada, conducted a study to test the hypothesis that the

use of computer-based text editors would increase the range of domains and number and complexity of operations within the domains, therefore, improving the effectiveness of the writing strategies used. Collier defines domains as punctuation, words, phrases, clauses, T-units (Nancy Sommers's reference to embedded clauses), idea clusters, and paragraphs. Collier defines operations as addition, deletion, substitution, and reordering of words, sentences, and paragraphs. He uses four subjects (ages 19-32) only one of whom could be classified as RW. The subjects first wrote and revised using pen and paper and then wrote and revised using word processor and printer. Collier determined that his study revealed the following: Students using computers used two-thirds more substitution, twice as much reordering, reduced deletions by two-thirds, increased manipulation of words, phrases, clauses, increased substitution of one word or T-unit for another, slightly increased length of essay, used more alternatives by revising revisions. Collier claims that he found improvement in seven out of ten domains and operations of average and superior students. All, including the RW, felt more productive when revising using the computer.[14] Collier agrees that the field of investigation of computer-assisted writing is greatly in need of research.

Two companion studies conducted in middle-class suburban Toronto explored the feasibility of computer assisted writing with elementary school children. The researchers attempted to investigate a form of assistance that reduces the cognitive demands of writing while allowing the writer total control over high level and low level aspects of the text.[15] It is

assumed that the authors, Woodruff, Bereiter, and Scardamalia, referred to evidence of quality (as defined by this researcher) as high level aspects and evidence of editing ..... of mechanics (as defined by this researcher) as low level aspects. Study I, concerned with the interactive capabilities of computers, researched sixth grade students who composed interactively with computer assisted phrasing, word choice, and sentence openers. Study II, involving eighth grade students, introduced more active intervention in the composing process using professional-writer-type response-sensitive questions. The program was expected to foster more fully developed essays and encourage students to clarify, elaborate, and support their statements.[16] The student opinion poll indicated that 75% of the sixth and eighth graders believed that they could write better on the computer, and 66.6% thought writing an easier task on the computer.[17] The researchers felt that although the students were extremely positive about working interactively with the computer during the composing process, one could not be sure if the effect were due to the novelty of typing on a keyboard connected to a screen or due to facilitation by the program.[18]

Programs are continuously being developed to add to the traditional word processing format in an attempt to aid writers in improving the readability of their texts. During the past three years, the U.S. Navy's Training Analysis and Evaluation Group has pioneered development of computer aids for authors. The programs flag uncommon words and long sentences as well as make suggestions for the editing of difficult sentences and awkward phrasing.[19] Wordsworth II, a program used by English composition teachers at Michigan Technological University is

representative of the programs that deal with the interactive responses of revision. As a supplemental tool, it uses the following format:

Early draft- it identifies aim and purpose, audience, focus; it defines major strengths and weaknesses, eliminates deadwood and considers organization.

Middle draft- it works with organization, focuses on theme, creates effective openers.

Late draft- it considers transitions, employs vivid verbs, evaluates punctuation, and checks spelling.[20]

Very similar to Writers Workbench, developed by Bell Labs, Wordsworth II appears to be an evaluative system that is used on the college level.

Another type of program, one that tends to attempt to shift external locus of control to internal is RSVP (Response System with Variable Prescriptions) developed by Miami Dade Junior College.[21] Because RWs, with low self- concepts, have achieved little literacy, they tend to exhibit strong external locus of control and are reluctant to take risks.[22] RSVP provides them with prescriptions for 156 mechanical and rhetorical errors for which they can take responsibility. Feedback also includes "non-prescriptive explanations of basic writing concepts." RSVP provides letters to students, depending upon the level of skill of each student, with remarks similar to those teachers frequently write in the margin of papers.[23] Although a computer can be programmed to copy a writing teacher, but not replace an excellent teacher, it can stimulate extended dialogues with more students than one teacher could possible instruct individually, thus saving much human time and energy.[24]

There are a variety of additional benefits to using a word processor. Multiple copies of a draft can easily be printed for use in peer-editing groups, and final drafts can be displayed without the stigma of poor handwriting. The absence of handwriting encourages large revisions, for time and poor small-motor-control are no longer a constraint.[25] Revision using the text editor can be more easily done in stages, and writers are free to concentrate on different aspects of revising at different times.[26]

Most composition teachers agree that anything that can encourage students to become involved in their own writing skills and the development of written composition "... whether it is the magic of the computer or the assistance of a program is only of theoretical importance."[27] According to Richard Collier, there seem to be distinct advantages for the superior student and moderate advantages for the average student: (1) Clarity of text on the screen appears to facilitate students' ability to contemplate additional revisions and reduces the tendency for infatuation with the text. (2) Students appear to be more realistic in assessing their own writing and are, therefore, more productive in revising.[28] It appears that computer assisted writing is making composing and revising easier and more enjoyable and should increase the students' desire to learn and to write.[29]

Opinions of the value of computer assisted writing and revising vary considerably and even contradict statements that have been made in support of the text writer. Occasionally, the same researcher will express ambivalence, even though he

experienced positive results.

Richard Collier has examined reasons why he feels that word processors might be of little value to a RW, who cannot adapt complex, holistic, mature revision strategies, regardless of teaching or technological aids. The more intricate kinds of revision that are applied to larger domains of texts, such as paragraphs, may strain the RW's conceptualization powers which have already been taxed by difficulties in selecting words and doing general proofreading. Most RWs are not proficient at switching from short to long term memory that is required beyond the stages of simple addition, deletion, or substitution. RWs frequently seem to apply the same principles to writing that they do to speech, thus behaving as if altering the text will permanently wipe out the original. In support of pen and paper revision, Collier feels that the text writer does not encourage students to make serious, elaborate additions, while the traditional method is superior for larger domains such as idea clusters and paragraphs. Through his experience, he concludes that RWs are more careful of surface problems when revising by hand. The students using the text editor carried more surface errors from one draft to the next, created new errors, and recognized and corrected fewer errors. Collier speculates that the use of the text editor is least successful for those with the weakest writing skills.[30]

According to James Britton, "writers need to scan in order to make alterations in their progressing text and to

retain control over their emerging ideas."[31] The computer screen is too small to provide a RW with constant access to his entire paper, causing a fragmented view that interferes with the recursive nature of writing. The revision strategies most frequently employed by the RW are those dealing with matters of diction (words, phrases, clauses). Editing in these smaller domains do not add much to the effectiveness of quality of a final draft. Because the word processors that are available today have such small screens and are too complex and sophisticated for the needs of a RW, he generally concentrates only on making minimal alterations.[32]

A 1979 study of the RSVP program, which included pre and posttests using essays written by community college freshmen in Florida resulted in the following conclusions: (1) Most students involved in the experimental group and five of the nine instructors in the nine colleges gave positive ratings to RSVP. (2) Tests showed no significant difference between the students in the experimental and the students in the control groups. (3) Researchers concluded that the computer generated messages that replace the teachers' notes in the margin of a paperare not likely to be more effective.[33] Although a computer program may be capable of prompting a student to revise through relevant questions, it cannot judge the quality of the response; therefore, "the student may produce quantities of garbage."[34]

Another disadvantage of computer usage for the composing/revising process is the keyboard itself. Many RWs find

concentrating on the typing aspect too taxing. Collier found that his weakest typists wanted to return to handwriting, for they felt that attention to the keyboard interrupted concentration on the text. In addition, RWs "become entranced by the superficial and frequently play with the word processor as if it were a game."[35] The Toronto study revealed no evidence that writing was better after using the text editor and suggested that the intrusiveness of the computer might have that result.[36] The computer's obtrusive form may interfere with the thought processes and may even reduce the quality of the final draft.[37]

Additional arguments surround the omission of tactile learning due to the use of a keyboard. When students work with the computer, they finger letters but do not feel the words they are writing. Computer correcting of spelling during the editing process does not provide tactile learning. If learning of spelling is to occur, the student must write the entire word , not simply change letters within the context of the word.[38]

Teachers in remedial writing courses, working with RWs, have been unable to help their students through the use of traditional textbooks.[39] There is need for new methods to enable RWs to overcome their problems in writing. "We blame slow-achieving students for their illiteracy, their poor study habits, lack of commitment, 'not trying,' wilful resistance, hostility, passivity, laziness, etc...."[40] Perhaps through the study of the effects of computers and text writers, the revising strategies of RWs can be improved, even though the level of revision may only include mechanical skills, lexical and structural aspects of a text.[41]

ENDNOTES

[1]John M. Kean, The Teaching of Writing in Our Schools (Bloomington, Indiana: Phi Delta Kappa Fastback, 1983) p. 26.

[2]Kean, P. 26.

[3]Mina Shaughnessey, Errors and Expectations (N.Y.: Oxford U. Press, 1979) p. 240.

[4]Irene Delpina, "In the Context of a Course: Word Processing for Basic Writers," (Phila: Community College of Phila., 1983) p. I-5.

[5]Shaughnessey, p. 15.

[6]Richard Gibhardt, "Writing Processes, Revision, and Rhetorical Problems: A Note on Three Recent Articles," College Composition and Communication, Vol. 34, No. 3, Oct., 1983, p. 296.

[7]Delpino, p. I-3.

[8]Richard M. Collier, "The Word Processor and Revision Strategies," College Composition and Communication, Vol. 34, No. 4, May, 1983, P.149.

[9]Gibhardt, p. 295.

[10]Gibhardt, p. 296.

[11]Margaret M. Withey, "The Computer and Writing," English Journal, Nov., 1983, p. 25.

[12]Thomas Friedman, "Teaching Error, Nurturing Confusion: Grammar Tests and Teachers in the Developmental English Class," College English, Vol. 45, No. 4, April, 1983, p. 395.

[13]Collier, p. 150.

[14]Collier, p. 150.

[15]Earl Woodruff and others, "On the Road to Computer Assisted Compositions," Journal of Educational Technical Systems, Vol 10, No. 2, 1981-82, p. 134.

[16]Woodruff, p. 144.

[17]Woodruff, p. 140.

[18]Woodruff, p. 137.

[19]Richard Braby and J. Peter Kincaid, "Computer Aided Authoring and Editing," Journal of Educational Technology Systems, Vol.10(2), 1981-82, p. 110.

[20]Cynthia A. Self and Billie J. Wahlstrom, "Benevolent Beast," The Writing Instructor, Vol.2, No.4, Summer, 1983, pp. 186-187.

[21]Withey, p. 27.

[22]Delpino, p. I-1.

[23]Withey, p. 27.

[24]Withey, p. 27.

[25]Withey, p. 29.

[26]Delpino, p. I-6.

[27]Collier, p. 151.

[28]Woodruff, p. 147.

[29]Woodruff, p. 147.

[30]Collier, pp. 149-154.

[31]Sheridan Blau, "Invisible Writing: Investigating Cognitive Processes in Composition," College Composition and Communication, Vol.34, No.2, May, 1983, p. 297.

[32]Collier, pp. 153-154.

[33]Withey, p. 27.

[34]Withey, p. 28.

[35]Collier, pp. 153-154.

[36]Woodruff, p. 144.

[37]Woodruff, p. 133.

[38]Friedman, p. 39.

[39]Friedman, p. 39.

[40]Delpino, p. I-3.

[41]Collier, p. 149.

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